	Present Maximum
General Public Health.....	$4,022,600
Tuberculosis.....	3,000,000
Mental Health.....	3,987,000
Venereal Disease.....	499,500
Crippled Children.....	497,900
Professional Training.....	250,000
Public Health Research....	100,000
Civilian Blind.....	1,243,900

"We are paying pensions to the blind at age forty on the same conditions as old age pensions as at present, that is with the means test. Seventy-five per cent of the cost is borne by the Federal Government and 25% by the provinces. Subject again to satisfactory arrangements with the provinces, it is the intention of the Federal Government to pay pensions to the blind beginning at the age of 21. We also aim to work out with the provinces arrangements whereby under certain conditions funds or services will be made available for the treatment of the blind.

"The fourth proposal we made with regard to health is to assist the provinces, municipalities or local agencies in building hospitals by making loans at cost. It is estimated by the Canadian Hospital Association that we need $125,000,000 worth of hospitals in Canada to provide essential service and that another $65,000,000 worth of construction will be needed within 10 years.

"These proposals taken together with what we are already doing constitute a pretty big program of health services for the Dominion and the provinces. If the Dominion Government's proposals are carried out they should, we hope, put Canada in the leadership of the world in matters of public health."

Men and Books

HISTORY OF FRENCH UROLOGY*

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Urology, which has a very definite place among the surgical specialties of our times, has had a very modest debut. We may even say that before the eighteenth century urology was almost completely ignored and even opposed by all the medical schools, in all countries. In ancient times and throughout the Middle Ages, it was left in the hands of ambulant or vagabond surgeons, who performed two kinds of operation: the catheterization of retention bladders and the extraction of bladder stones. The fact that the patients suffering from one of these two conditions was condemned to certain death, and this, in a very short time, most likely accounts for the lack of interest showed in urology by the surgeons of the first eighteen centuries of our era.

Even with the bad reputation of early urological surgeons, a few great names have survived the ages and are known to all of us. Without any prejudice, because history is made out of facts, I will recall to you the main figures who were the pioneers of urology and who, by their achievements, made this science what it is today. The history of French urology is the history of urology itself because most of its data were brought to us by French surgeons.

The first important observations in urological science were made by Pitard in 1250; it was the first serious study of the anatomy of the human kidneys, ureters and bladder and was based on facts observed and described by the dissection of these organs.

In 1361, Guy de Chauliac, although not the first surgeon to perform perineal median cystostomy for extraction of bladder stones, because this operation was performed many centuries before his time, was the first surgeon to give a clear and detailed description of the technique of this operation. Ambroise Paré, the father of surgery, completed this description in 1540, although his observations were only theoretical, because he never performed the operation himself.

The first suprapubic cystostomy was performed in France by Franco in 1560 but as the results were disastrous, this technique was not employed again for almost two hundred years.

In 1697, Jacques de Beaulieu, better known under the name of "Frère Jacques" introduced a modification to perineal cystostomy. Instead of using a median incision, he performed a lateral one which brought better results because the hæmorrhage was less abundant, the urethra was not traumatized and the healing of the wound was much faster.

Jean Louis Petit who described the anatomical triangle situated in the lumbar muscular region which is still named after him, invented the first curved catheter, which was built in 1700, and it was adapted to the normal anatomical direction of the male urethra.

Then came two surgeons, Rousset of Montpellier and Jean Baseilhac known as "Frère Côme" who between 1727 and 1755 brought the technique of the perineal and the suprapubic cystostomies to the highest degree of perfection attainable before the development of antiseptic and aseptic surgery. As a matter of fact Frère Côme obtained an international reputation by his successful performances of cystostomies for stone extraction.

These operations, brilliant as they were for this period, when performed by specialists, still continued to have disastrous results when performed by less skilful performers. This is the

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reason which led the surgeons to find a less serious operation to remove stones from the bladder, and brought about the development of lithotrity, and it was the improvements in this during the nineteenth century which saw the real birth of urology. It is during those years, that urological surgery began to be individualized as a specialty. In fact, we will see that the nineteenth century saw the establishment of the basic foundations of pathological, surgical and instrumental knowledge which, in some cases, have undergone no changes up to our era of modern urology.

The first name to be noticed in the nineteenth century for his achievements was Civiale who on January 13, 1824, in Paris, performed the very first lithotrity or the crushing of a bladder stone. He performed the operation with an instrument called the lithontriptor, which consisted of four branches in between which the stone was caught and crushed. In 1832, Heurteloup invented the first real lithotritor with two branches sliding into one another, thus permitting the grasping of the stone, which was then crushed by percussion on the inner branch with a small hammer. Charriere one year later perfected this instrument by the addition of the screw on its handle.

In 1834, Leroy d'Etiolles invented the urethral explorators of different sizes, by means of which he was able to estimate the calibre and the number of urethral strictures. He went further and was the first surgeon to invent an instrument to remove the prostatic adenoma through the urethra, by means of a cutting noose wire, thus being a pioneer on the transurethral resection of the prostate. In the same year, Mercier invented the elbowed-end catheter which is still in use, without having been modified. In 1836, Nelaton invented the rubber catheter which still bears his name. In 1841, Mercier of whom I have just spoken, was the first urologist to give a clear and precise description of the prostatic adenoma, with its median and lateral lobes and the rôle played by these lobes in the retention of urine, whether partial or complete. During these same years, Beniqué invented his metallic double-curved dilatators which are still utilized for the dilatation of urethral strictures.

In 1853, Antonin Desormeaux, although not the first urologist to conceive the endoscopic exploration of the bladder, introduced the first practical cystoscope, and in his *Traité de l'endoscopie* written in 1865, described many aspects of the pathological bladder; although it is with the Austrian urologist Nitze, who introduced his cystoscope in Vienna in 1879, that cystoscopy attained its real development.

In 1855, Maisonneuve invented his urethrotome for internal section of urethral strictures and presented it to the Academy of Medicine. This urethrotome was so simple and so easy to manœuvre, that it is still frequently employed by urologists of all countries and, in our opinion, it has not been surpassed yet by any instrument built for the same purpose since then.

All the personalities whom I have just recalled and whose improvements in urology I have reviewed, were general surgeons. In fact it was with the arrival of Felix Guyon at Necker Hospital in Paris, on July 9, 1867, that urology started to undergo so many improvements and that it really could claim its own place among the surgical specialties, a place it has held since then.

Guyon, the father of urology, of whom the German urologist Israël, at the international meeting of urologists held in 1910 said that, "all the urologists of the world were his pupils", was the first surgeon to give all of his life to the development and to the scientific improvement of urology; so much so that in 1890, his teaching was recognized officially by the University of Paris and Guyon was appointed professor of urology. The contributions to urology by Guyon are so numerous and important that it would be inexcusable not to mention all of them. He described the clinical symptoms of papilloma and of cancer of the bladder. He gave a very definite description of bladder distension and its repercussion on the kidneys, and also analyzed very precisely the subsequent intoxication caused by the rising of urea in the blood. His clinical studies of cancer of the prostate and especially of the prostato-pelvic carcinoma are still classical. The physiology of the contractions of the normal and of the pathological bladder had no secrets for him and that is one of the reasons why he was recognized during nearly thirty years as the master of lithotrity; in fact his mortality rate in this special operation never rose above 2%. Guyon also established definitely the technique of internal urethrotomy, by setting an indwelling-catheter in the urethra following the operation, and thus brought down the mortality rate of this operation from 60% to 2%. He gave a complete clinical description of urinary septicæmia. He also described the best way to make a good bi-manual palpation of the kidneys, which is today a matter of routine to all of us. He brought the technique of suprapubic cystostomy to such a degree of perfection that we still perform this operation in accordance with it. Guyon also proposed the two-stage operation in traumatic ruptures of the urethra in cases where there is extensive injury to adjoining tissues. All of his conceptions were clearly set forth in the book he wrote on clinical urology, entitled *Leçon cliniques*, which for many years was the gospel of urology. We owe all these great achievements, which were the foundations of modern urology, to this great urologist, Felix Guyon, whose name will always be associated with our specialty; and, let us hope that we will never forget this scientific father of us all.

In 1906, Guyon retired and Albarran, his most beloved pupil and collaborator, was ap-

pointed to succeed him. Albarran continued the work of his master and although his career was very short, his scientific achievements equalled, if not surpassed, those of his predecessor.

Albarran although a Cuban by birth, was French by adoption and it was in Paris that he received his whole medical education and that all his achievements were made. The contributions of Albarran are so numerous and so important, that no urologists can afford to ignore them. He gave such an impulse to urology that most of his observations are still up-to-date, forty years after he established them.

In 1888, he described the rôle played by the colon bacilli in the infections of the urinary tract. In 1892, he explained the mechanism of the formation of hydronephrosis, and made an elaborate study of perinephritis, showing that this could be of two types, that is, consecutive to a renal infection or to a generalized infection. The year 1897 saw the greatest achievement of Albarran and, even if it had been his only one, it was in itself sufficient to immortalize his name; this great innovation was the adaptation of the cystoscopic lever to the Nitze cystoscope, which rendered possible the catheterization of the ureters and thus opened the way to the complete exploration of the urinary tract. In 1898, he described the pathology of the urinary abscess and the rôle played by anaerobes in this type of fulminating infection. In 1900, he published his histo-pathological findings on the pathological prostate and showed that benign hypertrophy was in reality the hypertrophy of the peri-urethral glands of the prostatic urethra, and that the prostatic carcinoma had its origin in the prostate gland itself. In 1901, he established the final points in the technique of perineal prostatectomy and in 1908, he was able to publish his first hundred cases with but 2% mortality. In 1902 he gave the first clear description of tumours of the kidney and of the pelvis, and also showed the different ways by which the kidney could be infected by tuberculosis. In 1905, Albarran demonstrated the wonderful results obtained by early nephrectomy in renal tuberculosis. In this same year he promulgated the first physiological laws concerning the elimination of urea by the kidneys. Finally in 1909, three years before his death, he published a volume on genito-urinary surgery entitled *Médecine opératoire des voies urinaires*, which was the completion of his very brilliant career, and still stands as one of the greatest urological documents of the first years of our century.

Albarran's personality was so great that he almost makes us forget the achievements of other French urologists, who also contributed largely to the advancement of urology.

Tuffier, in 1887, demonstrated the possibility of nephrectomy, by showing that the remaining kidney had enough power of compensation to allow a normal life, after that operation. He also demonstrated that nephrostomy could be performed without any danger as long as momentary compression was applied to the renal vascular pedicle, and he established the best technique to suture the incision on the kidney itself. A few years later, he described capsular nephropexy and also the best way to open the ureter and suture it afterwards, in order to avoid urinary fistulas, thus opening the way to the surgery of the ureter.

In the same year Pasteau introduced the graduated ureteral catheter thus enabling the operator to know exactly to what distance the catheter is introduced in the ureter.

Albarran, outside of his great personal achievements contributed by his teaching to the scientific training of many urologists who continued his work. Among these were Legueu, Luys, Chevassus, Heitz-Boyer, Papin, Jeanbrau, Lepoutre and the great Marion, who were the greatest urologists to follow in the steps of Guyon and Albarran.

In 1913, Legueu was appointed professor of urology and started where Albarran had left off. Among his main achievements we have the establishment of surgical indications in the surgery of renal lithiasis, and the application of local anæsthesia to prostatectomy, thus enabling urologists to operate on patients who could not have survived the postoperative complications of general anæsthesia which was not so well developed in those days. Legueu also made great contributions to the study of the renal secretion, to the surgical treatment of urethral strictures and to the surgery of the ruptured urethra. His book entitled *Traité d'Urologie* was the completion of his master's publications.

In 1913, Luys performed the first transurethral removal of the prostate and called this operation the "forage" of the prostate which in fact, was the point of departure of the transurethral resection of the prostate so well improved and perfected by the American school of urology.

Chevassus who is mostly known for the classification of tumours of the testicles which he published in 1906, and which is still referred to, was actually the first urologist to apply to urinary surgery the laws of Ambard who established the relation existing between the blood urea and the urea in the urine. Chevassus also contributed largely to the study of ureteropyelography.

Heitz-Boyer, considered as the most beloved pupil of Albarran, was the first urologist to practise electro-coagulation of papillomas of the bladder through the cystoscope.

Papin, another disciple of Albarran, contributed largely to the improvement of Volker's and Lichtenberg's pyelography introduced in 1906. His greatest achievement though, was his masterly study of the congenital malfor-

mations of the kidneys and ureters, which has not been surpassed yet. The same applies to his observations on hydronephrosis. To surgical urology he brought new techniques of pyelotomy and of hemi-nephrectomy, and he introduced the denervation of the kidneys.

Jeanbrau, professor of urology at the University of Montpellier, made a large contribution to the diagnosis and treatment of ureteral stones.

Lepoutre, professor of urology at the University of Lille, under whom I studied, made a marvellous study of the ruptured urethra and his book entitled *Les ruptures de l'urèthre* published in 1934, is still the best work published on this subject. With Pillet of Rouen he was the first urologist to promote the palpation of the kidney in the vertical position and also the making of pyelograms in this position. Lepoutre also published two books on surgical urology.

Ombredanne, although not a urologist, has created two very brilliant techniques, one for the cure of penile hypospadias on children and the other for the scrotal orchidopexy in cases of ectopy of the testicle. Duplay also introduced a technique which is employed by all urologists for the cure of hypospadias.

We come now to the greatest disciple of Guyon and Albarran who since 1908 has been the outstanding master of French urology. His name is Georges Marion. He headed the department of urology at Lariboisière Hospital in Paris from 1908 to 1931 and then the same department at Necker Hospital after he was appointed professor of urology at the University of Paris where I had the opportunity to listen to his marvellous lectures which were so brilliant in their precision and so remarkable in their clearness of exposition.

Marion's publications were so numerous that it is impossible to speak of them all. His main ones were his *Précis de thérapeutique urinaire* published in 1910, his *Leçons de chirurgie urinaire*, published in 1912, and a few years later, his *Traité pratique de cystoscopie et de cathétérisme urétéral*, which he wrote in collaboration with Heitz-Boyer, and which was the first of its kind to be published in the world. This manual has been at the base of teaching of the different aspects of pathological conditions of the bladder observed through the cystoscope. After the last war came his *Traité d'Urologie* in two volumes which has been edited three times since, and is surely the best of them all. This manual, although written by Marion alone, can compare with any other manual written in collaboration by many urologists. He also published his *Manuel de technique chirurgicale*, and in 1936 appeared his book entitled *Quelques vérités premières en urologie.*

Marion, apart from being a marvellous teacher has created many new surgical techniques which are now widely used the world over. I will recall the principal ones. First came his "enlarged pyelotomy" in which the incision includes both the pelvis and the renal parenchyma and permits us to remove large stones from the kidney easily and with no danger. He promoted a new technique for nephrostomies for drainage of the kidney, with the use of Tripier's dilatation conductor. His greatest gift to renal surgery was the management of the renal vascular pedicle during nephrectomy, when the latter is torn off or slips. Unbelievable as it may seem, I have, with many of his other pupils, seen him purposely tear away the renal pedicle to show us what to do in such a case to control the hæmorrhage and save the patient's life. Marion also contributed largely to the amelioration of the post-operative treatment following prostatectomy, with the different drainage tubes he has devised. In 1913, he devised his own technique for the resection of bladder diverticula. A few years later he described his own technique for the transvesical surgical cure of vesico-vaginal fistulæ; a technique which, if well followed, enables urologists to obtain a certain cure in nearly a 100% of cases; he also published a technique by means of which we can cure the female patients suffering from incontinence of urine, by shortening the vesical sphincter. Marion also contributed largely to the surgery of the urethra. In this field his circular urethrorraphy is still the operation of choice for the treatment of traumatic rupture of the posterior urethra. Finally Marion devised an excellent technique for the surgical cure of hypospadias.

I have summarized very briefly the main achievements brought to us by the French school of urology. As we can see, they are so numerous and so very important that without exaggeration, it is possible to say that no other country has done so much for our specialty.

As a conclusion to this brief review of facts, may I take the liberty to suggest that all Canadian urologists who have received their training either in Canada, in France, in England, or, in the United States, should join up together, take the best out of these schools and thus by working hand in hand in a spirit of "bonne entente", create a Canadian school of urology which in my opinion could attain the highest point of efficiency and be surpassed by no one.

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We must not require too much of those who are willing to serve us; we should never misuse anyone's courtesy, nor over-ride a willing horse. "If your friend be sugar, you must not eat him all up."—Hebrew proverb.